

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Original) A method of performing a single determination of distance to an echo point in a wire-line medium, said method comprising:

transmitting a first sequence of bits on said wire-line medium;

monitoring said wire-line medium to determine reception of said first sequence of bits as an echo from said echo point; and

computing a distance to said echo point according to a time taken to receive said echo after said transmitting, whereby said single determination is performed based on said first sequence of bits.

2. (Original) The method of claim 1, wherein said first sequence of bits exhibits a good auto-correlation property, whereby said first sequence of bits exhibits a low correlation with said first sequence of bits shifted by one or more positions.

3. (Original) The method of claim 2, wherein said monitoring comprises:

generating a monitored sequence of bits by sampling a signal received on said wire-line-medium; and

comparing said monitored sequence of bits and said first sequence of bits on a bit by bit basis.

4. (Original) The method of claim 3, wherein said generating and said comparing are performed continuously such that said reception of echo can be determined accurately.

5. (Original) The method of claim 3, wherein said comparing comprises performing a XNOR operation.
6. (Original) The method of claim 3, wherein said generating comprises setting a monitored bit to a logical 0 if a voltage level on said wire-line medium is less than a threshold voltage and to logical 1 otherwise.
7. (Original) The method of claim 3, wherein said monitoring further comprises measuring a correlation factor representing a number of matching bits encountered in said comparing.
8. (Original) The method of claim 1, said computing comprises multiplying said time taken with a velocity value, wherein said velocity value corresponds to velocity of propagation of bits on the said wire-line medium.
9. (Original) The method of claim 1, wherein said wire-line medium comprises a local loop.
10. (Original) An line card performing a single determination of distance to an echo point in a wire-line medium, said line card comprising:
- a port coupled to said wire-line medium;
 - means for transmitting a first sequence of bits on said port; and
 - means for monitoring said wire-line medium .to determine reception of said first
- sequence of bits as an echo from said echo point, wherein a distance to said echo point is computed according to a time taken to receive said echo after said transmitting, whereby said single determination is performed based on said first sequence of bits.

11. (Original) The line card of claim 10, wherein said first sequence of bits exhibits a good auto-correlation property, whereby said first sequence of bits exhibits's low correlation with said first sequence of bits shifted by one or more positions.

12. (Original) The line card of claim 11, wherein said means for monitoring is operable to generate a monitored sequence of bits by sampling a signal received on said wire-line medium; and compare said monitored sequence of bits and said first sequence of bits on a bit by bit basis.

13. (Original) The line card of claim 12, wherein said wire-line medium comprises a local loop.

14 - 16. (Canceled).

17. (Original) A test processor for performing a single determination of distance to an echo point in a wire-line medium, said test processor comprising:

an outbound interface;

a transmission block causing said outbound interface to transmit a first sequence of bits on said wire-line medium; and

an inbound interface generating a monitored sequence based on a signal received on said wire-line medium, wherein said monitored sequence is examined to determine reception of said first sequence of bits as an echo from said echo point, and wherein a distance to said echo point is computed according to a time taken to receive said echo after said transmitting, whereby said single determination is performed based on said first sequence of bits.

18. (Original) The test processor of claim 17, further comprising a signal generation and monitor block which receives data indicating a specific port on

which said wire-line medium is connected, wherein said first sequence of bits are caused to be transmitted on said specific port.

19. (Original) The test processor of claim 18, wherein said signal generation and monitor block examines said monitored sequence to determine reception of said first sequence of bits.

20. (Original) The test processor of claim 19, wherein said signal generation and monitor block receives said first sequence of bits and a data bit rate from an external system, wherein said first sequence of bits are transmitted at said bit rate.

21. (Original) The test processor of claim 19, further comprising a parameters table storing said first sequence of bits and said bit rate.

22. (Original) The test processor of claim 18, wherein said signal generation and monitor block examines said monitored sequence to determine reception of said first sequence of bits as an echo from said echo point, and computing a distance to said echo point according to a time taken to receive said echo after said transmitting, whereby said single determination is performed based on said first sequence of bits.

23. (Original) The test processor of claim 18, wherein said first sequence of bits exhibits a good auto-correlation property, whereby said first sequence of bits exhibits a low correlation with said first sequence of bits shifted by one or more positions.

24. (Original) The test processor of claim 23; wherein said first sequence of bits comprise relaxed Barker codes.